
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB83

Endangered and Threatened Wildlife and Plants; Proposal to Determine Two Utah Plants, *Lesquerella tumulosa* (Kodachrome Bladderpod) and *Lepidium montanum* Var. *stelloe* (Kodachrome Pepper-Grass), to be Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to determine two Utah mustard plants, *Lesquerella tumulosa* (Kodachrome bladderpod) and *Lepidium montanum* var. *stelloe* (Kodachrome pepper-grass), to be endangered species. These two species are endemic to soils derived from the Carmel geological formation in the lower elevations of the Paria River drainage in Kane County in southern Utah. These two plants have one small population each on the same shared habitat. A significant portion of the species habitat is subject to disturbance from recreational off-road vehicle activity and potentially from mineral development. A determination that *L.*

tumulosa and *L. m.* var. *stellae* are endangered species would provide these plants protection under the authority of the Endangered Species Act, as amended. The Service is requesting comments on this proposed action.

DATES: Comments from all interested parties must be received by January 4, 1993. Public hearing requests must be received by December 18, 1992.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service, 2060 Administration Building, 1745 West 1700 South, Salt Lake City, Utah 84104. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: John L. England at the above address (801/524-4430).

SUPPLEMENTARY INFORMATION:

Background

The Kodachrome bladderpod was discovered by Rupert Barneby in 1966 from a site in the Kodachrome Basin of the Paria River drainage in extreme northern Kane County, Utah. Barneby (1966) described the plant as *Lesquerella hitchcockii* ssp. *tumulosa*, comparing the taxon with *Lesquerella hitchcockii* ssp. *rubicundula* (now *Lesquerella rubicundula*) from the nearby Paunsagunt Plateau. James Reveal, in his taxonomic treatment of the *Lesquerella hitchcockii* complex of species, elevated Barneby's *L. h. tumulosa* to species rank as *Lesquerella tumulosa* (Reveal 1970). Rollins and Shaw (1973) submerger *L. tumulosa* in *L. rubicundula*. Welsh and Reveal (1977) and Welsh et al. (1987) reestablished *L. tumulosa* based on: (1) Its distinctive gross vegetative morphology (*L. tumulosa* has very small linear leaves and a distinctive pulvinate growth form arising from a many branched caudex as opposed to *L. rubicundula* which has spatulate leaves and a caespitose growth form arising from a simple to few branched caudex), (2) its ecological setting (*L. tumulosa* is restricted to very xeric shale outcrops at about 1,740 m (5,700 ft) elevation as opposed to *L. rubicundula* on much more mesic limestone soils at about 2,040 m (6,700 ft) elevation and higher, and (3) its spatial separation (*L. tumulosa* is restricted to a small area in Kodachrome Basin and *L. rubicundula* is restricted to a limited area on the Paunsagunt Plateau with no known intermediate populations).

The Kodachrome pepper-grass was discovered by Stella and Stanley Welsh

in 1975 from the same site as the *L. tumulosa* population. Welsh and Reveal (1977) described the species as *Lepidium montanum* var. *stellae*.

Lesquerella tumulosa is a perennial herbaceous plant, with a densely pulvinate caespitose growth form from a many-branched caudex forming hemispheric clumps or cushions. The caudex branches are clothed with numerous marcescent leaves and leaf bases. The stems are 1 to 4 cm (0.4 to 1.6 in) tall with mainly basal leaves. The leaves are narrowly linear 2 to 10 mm (0.1 to 0.4 in) long and about 1 mm (0.05 in) wide, pubescent with stellate hairs, and not differentiated into a blade and petiole. The flowers of *L. tumulosa* have spatulate, yellow petals 5 to 7 mm (0.2 to 0.3 in) long. The fruit is an ovoid silicle about 3 mm (0.1 in) long containing two to four seeds (Barneby 1966, Reveal 1970, Welsh and Reveal 1977, Welsh et al. 1987).

Lepidium montanum var. *stellae* is a perennial herbaceous plant, with stems 5 to 10 cm (2 to 4 in) tall arising from a woody caudex. The leaves are pinnately lobed about 2 cm (0.8 in) long and 0.8 cm (0.3 in) wide. The flowers of *L. m. stellae* have petals that are white and measure about 2.5 mm (0.1 in) long. The fruit is a compressed silicle about 3 mm (0.1 in) long covered with short stiff hairs and contains two seeds (Welsh and Reveal 1977, Welsh et al. 1987).

Lesquerella tumulosa grows on sparsely vegetated white shale knolls in thin, poorly developed soils derived from the Winsor member of the Carmel geologic formation (Welsh and Reveal 1977, Welsh 1978, Franklin 1990). Plant species commonly associated with *L. tumulosa* include: *Pinus edulis*, *Juniperus osteosperma*, *Purshia tridentata*, *Cryptantha flava*, *Stipa hymenoides*, *Eriogonum corymbosum*, *Asclepias cryptoceras*, *Hymenopappus filifolius*, and *Oenothera caespitosa*. *L. tumulosa* is restricted to one population with scattered occurrences with total range of about 4 km (2.5 mi) across in its largest dimension in the Kodachrome flats area of the Paria River drainage in northern Kane County, Utah. The species total population is about 20,000 plants (Franklin 1990). *L. tumulosa*'s small population and restricted habitat make the species vulnerable to man-caused and natural environmental disturbances. Some habitat has been destroyed in the past by gravel aggregate removal (Welsh 1978). Off-road vehicle use and mineral exploration and mining claim assessment work are potential threats to the species habitat (John L. England, U.S. Fish and Wildlife Service, pers. obs., 1991, 1992).

Lepidium montanum var. *stellae* grows on the same geological formation as *L. tumulosa* but in a different microhabitat in one of the following three situations: (1) On gypsiferous layers forming outcrops on the above-mentioned shale knolls, (2) on downslope soils influenced by those gypsiferous layers, and (3) on accumulated leaf litter under pinyons (*Pinus edulis*) along drainage channels through the knolls (Franklin 1990). Plant species normally associated with *L. m. stellae* include: *Pinus edulis*, *Juniperus osteosperma*, *Purshia tridentata*, *Cryptantha flava*, *Cryptantha fulvocanescens*, *Hilaria jamesii*, *Eriogonum corymbosum*, *Muhlenbergia pungens*, *Hymenopappus filifolius*, and *Ephedra viridis*. The *L. m.* var. *stellae* population has approximately the same distribution as *L. tumulosa*. The species total known population is less than 1,000 plants (Franklin 1990). *L. m.* var. *stellae* has the same vulnerabilities and threats as *L. tumulosa*.

Lepidium montanum var. *stellae* and *L. tumulosa* occur only on public lands owned and managed by the State of Utah or the Bureau of Land Management. The majority of the population of *L. tumulosa* occurs on one section of State land, and a significant portion of *L. m.* var. *stellae* also occurs on State-owned land. The balance of the population for both species occur on adjacent Federal lands.

Section 12 of the Endangered Species Act (Act) of 1973 (16 U.S.C. 1531 et seq.) directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Fish and Wildlife Service (Service) published a notice in the *Federal Register* (40 FR 27823) of its acceptance of the report as a petition to list the taxa named therein under section 4(c)(2) of the Act (petition acceptance is now governed by section 4(b)(3)(A) of the Act), and its intention to review the status of those plants.

Lesquerella tumulosa was proposed by the Service for listing as endangered along with some 1,700 other vascular plant taxa on June 18, 1976 (41 FR 24523). General comments received in relation to the 1976 proposal are summarized in an April 26, 1978, *Federal Register* publication (43 FR 17909). The 1978 amendments to the Act required that all proposals over 2 years old be withdrawn, though proposals published before the date of enactment of the 1978 amendments could not be withdrawn before the end of a 1-year grace period

beginning on the date of enactment. On December 10, 1979, the Service published a notice of withdrawal of that portion of the June 16, 1976, proposal that had not been made final (44 FR 70796), including *L. tumulosa*.

The July 1975 notice was updated by a notice in the Federal Register on December 15, 1980 (45 FR 82480), which included *L. tumulosa* and *L. m. var. stellae* as category 1 species. Category 1 comprises taxa for which the Service presently has significant biological information to support their being proposed to be listed as endangered or threatened species. The Service published a notice of review on November 28, 1983 (48 FR 53640), which supplemented the 1980 notice. This notice moved *L. m. var. stellae* to category 2. Category 2 comprises taxa for which information in the possession of the Service indicates that proposing the species is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently known or on file to support a proposed rule. The Service at that time deemed that additional status information concerning the abundance and distribution of *L. m. var. stellae* was needed before the species should be proposed as endangered or threatened.

The Service published a notice of review on September 27, 1985 (50 FR 39526), replacing the 1980 Notice of Review and the 1983 supplement. This Notice of Review moved *L. tumulosa* from category 1 to category 2. The Service received a status survey report which indicated that the population of *L. tumulosa* was much larger than previously reported (Hreha 1982). The Service deemed it prudent at that time to further review the status of *L. tumulosa* before proposing to list the species as either endangered or threatened. The Service also returned *L. m. var. stellae* to category 1 in that notice because its abundance and distribution were then known to be extremely limited and the plant highly vulnerable to habitat destruction. On February 21, 1990, the Service published a new notice of review (55 FR 6184) replacing the previous notices. This notice maintained both *L. tumulosa* and *L. m. var. stellae* at the same categories as in the 1985 notice. The Service has since received additional information (Franklin 1990), which has been validated by Service personnel, that indicates that both *L. tumulosa* and *L. m. var. stellae* should be listed as endangered. The Service now considers both plants to be category 1 species.

Section 4(b)(3)(B) of the 1982 amendments to the Act requires the

Secretary of the Interior to make findings on certain petitions within 1 year of their receipt. Section 2(b)(1) of the Act's amendments of 1982 further requires that all petitions pending as of October 13, 1982, be treated as having been newly submitted on that date. The 1975 Smithsonian report was accepted as a petition and the plant taxa in the Service's 1980 and 1985 notices are treated as though they are petitioned. Beginning on October 13, 1983, and each successive year, the Service has made 1-year findings that the petition to list *L. tumulosa* and *L. m. var. stellae* was warranted, but precluded by other listing actions of higher priority. This proposed rule constitutes the next 1-year petition finding for *L. tumulosa* and *L. m. var. stellae*.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Lesquerella tumulosa* (Barneby) Reveal and *Lepidium montanum* var. *stellae* Welsh and Reveal are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The *L. tumulosa* and *L. m. var. stellae* populations are on Federal and State lands subject to leasing for their oil and gas energy reserves. Portions of the habitat have been disturbed by prospecting and the excavating of gravel and clay. Both plants are vulnerable to any surface disturbing activity associated with mineral development within their habitat (Welsh 1978). Recent inventories for these species have demonstrated very small populations and ranges for these plants (Franklin 1990; John L. England, pers. obs., 1991, 1992). Both *L. tumulosa* and *L. m. var. stellae* are vulnerable to the habitat disturbing effects of dispersed off-road vehicle recreation.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

None known. However, because of the limited distribution of *L. tumulosa* and *L. m. var. stellae*, both species are vulnerable to vandalism.

C. Disease or Predation

Sheep and cattle grazing may have had an impact on *L. tumulosa* and *L. m. var. stellae* historically, but with current levels of grazing intensity and grazing management by the Bureau of Land Management, domestic livestock grazing is not expected to significantly impact either species.

D. The Inadequacy of Existing Regulatory Mechanisms

There are no Federal, State, or local laws or regulations that address these species specifically or directly provide for the protection of their habitat. The Bureau of Land Management is aware of both *L. tumulosa* and *L. m. var. stellae* and is considering them in environmental planning of their habitat areas until the Service makes a final determination concerning their status under the Act. No Federal Agencies are currently under legal obligation for the conservation of *L. tumulosa* and *L. m. var. stellae*. The Utah State Land Board is authorized, by State law, to provide conservation planning for federally listed endangered and threatened plant species, but no such recognition is granted to species that are not recognized as endangered or threatened under Federal law. The majority of the population of *L. tumulosa* and much of *L. m. var. stellae* are on one section of land owned by the State of Utah.

E. Other Natural or Manmade Factors Affecting Their Continued Existence

The total population of *L. tumulosa* is about 20,000 individuals (Franklin 1990). The total population of *L. m. var. stellae* is less than 1,000 individuals (Franklin 1990). The populations of these species, especially *L. m. var. stellae*, are at levels which may not be demographically stable in the medium to long term. The existence of just one population for each of these species makes them particularly vulnerable to extinction from any catastrophic event to either of the species populations or its very limited habitat. The effects of past habitat degradation on the species ability to respond to environmental stress is not known but may be critical to the species future existence. *L. m. var. stellae* in particular may not have sufficient genetic variability to provide for long-term adaptation to natural changes in environmental conditions.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by *L. tumulosa* and *L. m. var. stellae* in determining to propose this rule. Based on this evaluation, the preferred action

is to list *Lesquerella-tumulosa* and *Lepidium montanum* var. *stellae* as endangered species. Both these species are rare local endemics on habitat that has the potential for being exploited for its mineral resources and damaged by recreational activities. The populations of both species are very small both in numbers and range and are vulnerable to environmental variation which may drive their populations to extinction. Because both of these two species have sympatric populations, on a single very small shared habitat that may face extinction, they fit the definition of endangered as defined by the Act. The status of threatened does not reflect the biological condition and vulnerability of these species populations. For the reasons given below, it is not considered prudent to propose designation of critical habitat.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be endangered or threatened. The Service finds that designation of critical habitat for *L. tumulosa* and *L. m. var. stellae* is not presently prudent for these species because possible adverse consequences from vandalism would likely outweigh the minimal benefits accruing from critical habitat designation.

As noted under Factor "A," *L. tumulosa* and *L. m. var. stellae* occupy extremely limited habitat. Designation of critical habitat would entail publication of a detailed description and map of this habitat in the Federal Register, exposing the species to the potential and probable threat of vandalism. Lacking mobility, plants are more vulnerable to vandalism than animals. One person could easily vandalize the single small *L. tumulosa* or *L. m. var. stellae* populations.

Moreover, few additional benefits would be provided to the species by the critical habitat designation that would not already be provided by listing the species as endangered, particularly because much of each species population is located on lands under Federal jurisdiction. Any Federal action that would impact the plant's habitat would affect the plants as rooted organisms and, consequently, would be addressed through section 7 consultation. Section 9(a)(2)(B) of the Act makes it unlawful to remove and reduce to possession any endangered species of plant from areas under Federal jurisdiction or to maliciously damage or destroy such species on any such area. Such provisions are difficult

to enforce and publication of critical habitat descriptions and maps would make both plants more vulnerable. The Bureau of Land Management is aware of the occurrence of *L. tumulosa* and *L. m. var. stellae* on Federal lands and of their obligations under the Act. The Utah Natural Heritage Program of the Utah Department of Natural Resources is similarly aware of each species population on State of Utah lands. Protection of the species habitat will also be accomplished through the recovery process.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal Agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal Agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal Agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal Agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal Agency must enter into formal consultation with the Service.

A significant portion of the known populations of *L. tumulosa* and *L. m. var. stellae* are on Federal lands under the jurisdiction of the Bureau of Land Management. The Bureau of Land Management, in addition, is responsible for the leasing of minerals under Federal

jurisdiction. The Bureau of Land Management would be responsible for ensuring that Federal land uses and actions are not likely to jeopardize the continued existence of *L. tumulosa* and *L. m. var. stellae*.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale these species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. It is anticipated that few, if any, trade permits would ever be sought or issued for *L. tumulosa* and *L. m. var. stellae* because the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, Room 432, 4401 North Fairfax Drive, Arlington, Virginia 22203 (703/358-2093).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposal are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *L. tumulosa* and *L. m. var. stellae*;

(2) The location of any additional populations of *L. tumulosa* and *L. m. var. stellae* and the reasons why any habitat should or should not be determined to be critical habitat as provided by Section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of *L. tumulosa* and *L. m. var. stellae*; and

(4) Current or planned activities in the subject area and their possible impacts on *L. tumulosa* and *L. m. stellae*.

Final promulgation of the regulation on these species will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Service's Field Supervisor in Salt Lake City, Utah (see ADDRESSES above).

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section

4(a) of the Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

- Barneby, R.C. 1966. New sorts of *Lesquerella*, *Euphorbia*, and *Viguiera* from Kane County, Utah. Leaflet West. Bot. 10:313-317.
- Franklin, M.C. 1990. Report for Bureau of Land Management: *Xylorhiza cronquistii*, *Lesquerella tumulosa*, *Lepidium montanum* var. *stellae*. Unpublished report prepared by the Utah Natural Heritage Program, Salt Lake City, Utah. 11 pp.
- Hreha, A.M. 1982. Status report on *Lesquerella tumulosa* (Barneby) Reveal. Unpublished report on file with U.S. Fish and Wildlife Service, Denver, Colorado. 21 pp.
- Reveal, J.L. 1970. Comments on *Lesquerella hitchcockii*. Great Basin Nat. 30:94-98.
- Rollins, R.C. and E.A. Shaw. 1973. The genus *Lesquerella* (Cruciferae) in North America. Harvard University Press, Cambridge, Mass. 288 pp.
- Welsh, S.L. 1978. Status report: *Lesquerella tumulosa*. U.S. Fish and Wildlife Service, Denver, Colorado. 8 pp.
- Welsh, S.L. and J.L. Reveal. 1977. Utah flora: Brassicaceae (Cruciferae). Great Basin Nat. 37: 379-365.
- Welsh S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins. 1987. A Utah flora. Great Basin Nat. Mem. 9:1-894.

Author

The primary author of this proposed rule is John L. England, Botanist, U.S. Fish and Wildlife Service, Salt Lake City, Utah (801/524-4430, see ADDRESSES above).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under Brassicaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

(h) . . .

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Brassicaceae—Mustard Family						
<i>Lepidium montanum</i> var. <i>stellae</i>	Kodachrome pepper-grass	U.S.A. (UT)	E		NA	NA
<i>Lesquerella tumulosa</i>	Kodachrome bladderpod	U.S.A. (UT)	E		NA	NA

Dated: October 9, 1992.

Richard N. Smith

Director, Fish and Wildlife Service

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